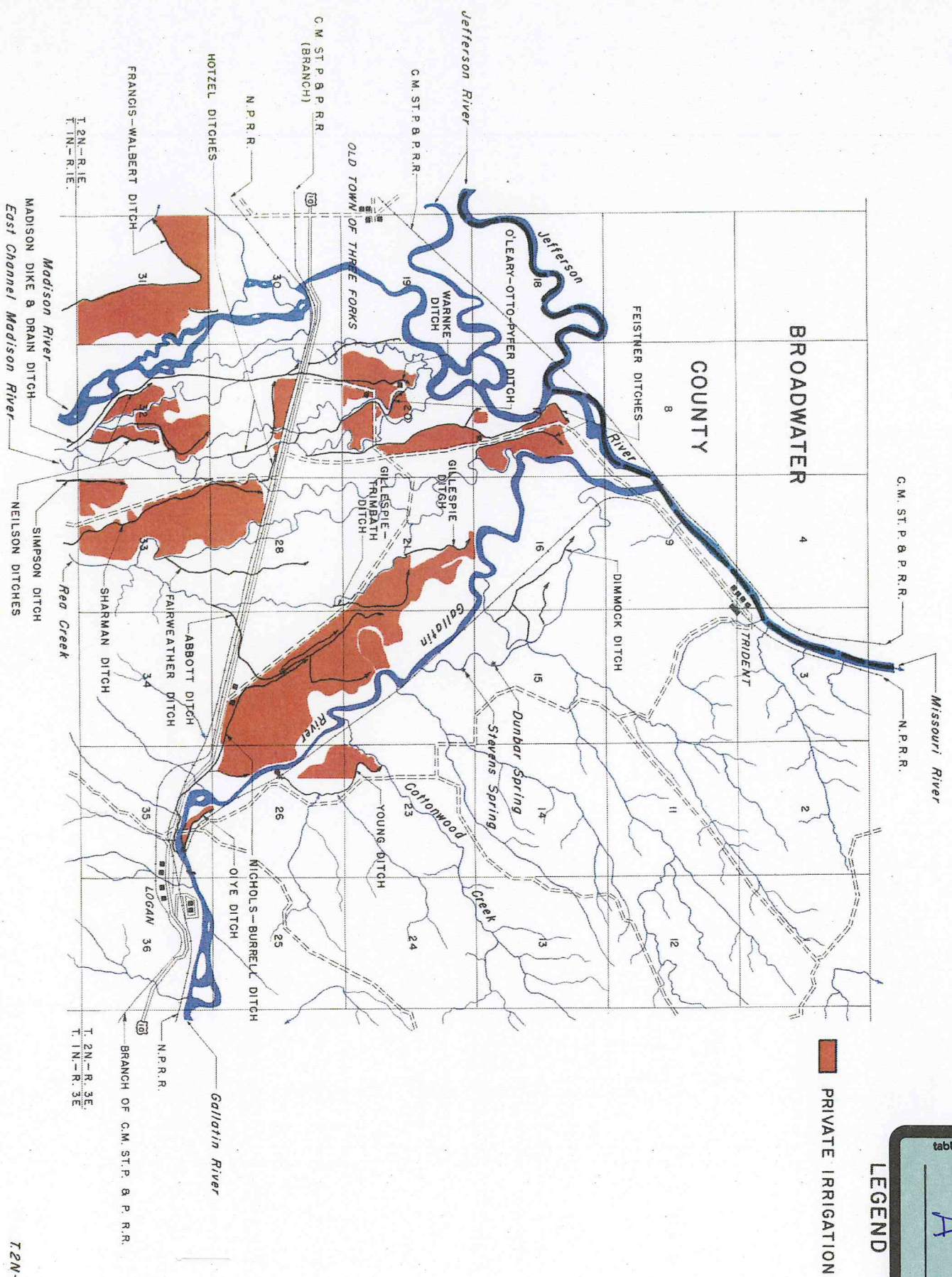


LEGEND

PRIVATE IRRIGATION



T. 2N.-R. 2E.



GALLATIN COUNTY



MEMORANDUM

TO: All Interested Parties

FROM: Greg Sullivan, Gallatin County Planning Director

DATE: May 5, 2008

SUBJECT: Traffic Impact Study Requirements

Unless otherwise specifically required or waived, the following are requirements of the Gallatin County Planning Department for Traffic Impacts Studies (TIS).

TRAFFIC IMPACT STUDY (TIS) REQUIRMENTS

1. **Purpose.** The primary purpose of a TIS is to determine the need for improvements to adjacent and nearby transportation systems in order to maintain an adequate level of service, safety, and access. For the purposes of this Regulation, the transportation system includes public roads, intersections, sidewalks, bike facilities, trails, and transit systems.
2. **Scope of Work.** The scope of work for a TIS shall first receive approval from the Gallatin County Planning Department (Planning Department). The scope of work at a minimum shall include the following elements:
 - a. **Study Area.** The geographic area included in the TIS shall be determined by the Planning Department and shall include at a minimum:
 - The access points to the site or use; and
 - All intersections in the vicinity of the proposed use that would experience significant increase of additional peak hour trips or be significantly impacted by the proposed use.

- b. Analysis Period. The TIS shall have an operations analysis performed for the weekday a.m. and p.m. peak hour at the study area intersections. However, the Planning Department may require certain uses to study other times.
- c. Study Time Frames. At a minimum the TIS shall include the following time frames:
 - Start date of use or start date of each phase of a phased use development.
 - Five year forecasts from the starting date of use.

3. **Minimum TIS Requirements.** The study requirements for a TIS are:

- A vicinity map showing the location of the project in relation to the transportation system of the area;
- Description of the proposed use and surrounding land uses;
- Trip generation forecast using data from the most recent edition of the Institute of Transportation Engineers (ITE) *Trip Generation* Manual unless more appropriate data is available and approved for use by the Planning Department;
- Existing conditions (including development that has been approved but not yet built, as identified by the Planning Department). Information characterizing the existing conditions shall be no more than one year old from the date of application submittal.
- Trip distribution assumptions based on historical data, existing and future travel characteristics, and capacity constraints;
- Existing traffic volumes;
- Existing and future levels of service, average vehicle delay and volume/capacity ratios (V/C) for all intersections and road sections within the study area with and without the proposed project;
- Forecast traffic volumes with and without the use;
- Safety analysis of all intersections impacted by the proposed use including the site access. The safety analysis shall include sight distance and operation characteristics, at a minimum;
- Analysis of right and left turn lane warrants (MDT standards);
- Analysis of parking needs of the proposed use;
- For mining and/or related processing operations: haul routes; trips per day; and the weight of loaded trucks, at a minimum;
- Analysis of access roads conditions. A road condition analysis shall at a minimum evaluate the road surface and road sub-grade conditions. Sub-grade evaluations shall be done by bore samples of cross-sections of roads at locations as determined by the Gallatin County Road and Bridge Department and/or Montana Department of Transportation.
- When required by Gallatin County Planning Department, a warrant analysis for traffic control devices;

- Findings and conclusions including a recommendation of suggested potential mitigation for site access impacts and off-site impacts and an evaluation of the effectiveness of those solutions; and
 - Additional information as required by the Planning Department.
4. **Peer Review.** All TISs shall be peer reviewed by a trained traffic engineers or transportation planners approved upon by the Planning Department.
- a. All fees for the peer review process shall paid by the applicant.
 - b. All proposed developments on the Montana Highway System shall be reviewed for sufficiency and approved by the Montana Department of Transportation.
5. **Waiver of Study Requirements.** Upon request from the applicant the requirement for a TIS, or the study elements listed in Minimum TIS Requirements, may be waived or modified by the Planning Director following consultation with a representative of the Gallatin County Road and Bridge Department and/or Montana Department of Transportation. The applicant shall document the reasons for the waiver or modification. Factors to be considered include, but are not limited to:
- a. roadway improvements are scheduled that are expected to mitigate any impacts associated with the proposed project; and
 - b. a similar TIS was previously prepared for the site and is still considered applicable.

F:\PLNG\Gravel Pit Operations\Interim Zoning March 08\FINAL GPit Interim May 08\Memo TIS Requirements.docx



July 8, 2009

Gallatin County, Montana

Road, Bridge, & Junk Vehicle Departments

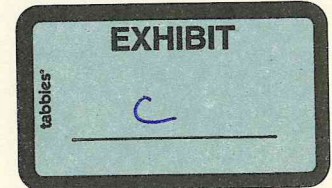
205 Baxter Lane West; Bozeman, MT 59718

Phone: (406) 582-3250

Fax: (406) 582-3255

www.gallatin.mt.gov

Gallatin County Planning
Gallatin County Courthouse
311 W. Main
Bozeman, MT 59715



ATTENTION: Mr. Tom Rogers, Planner

Re: Zuelke Gravel Pit CUP

After review of the foregoing conditional use permit, I provide you with the following comments:

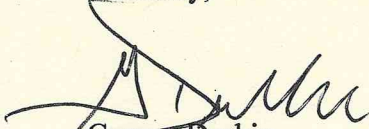
A STOP sign shall be installed at the intersection of Madison Road and the pit haul road. TRUCKS ENTRING signs shall be in place at least 500 linear feet each side of the haul road entrance to Madison Road. All signage must conform to the Manual on Uniform Traffic Control Devices (MUTCD), current edition.

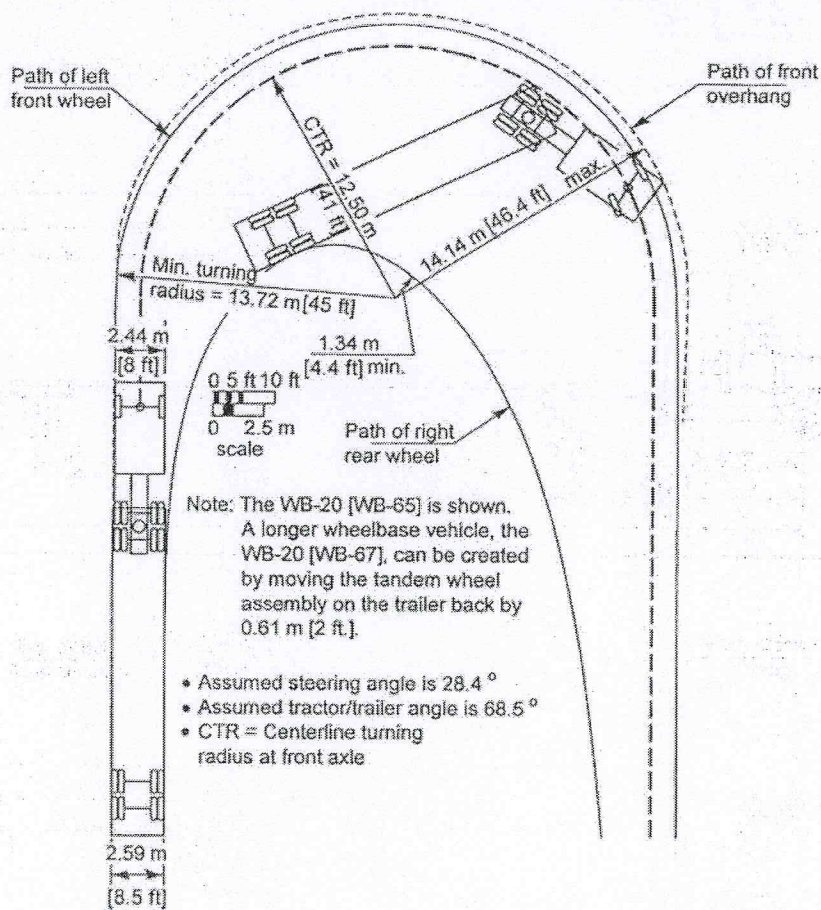
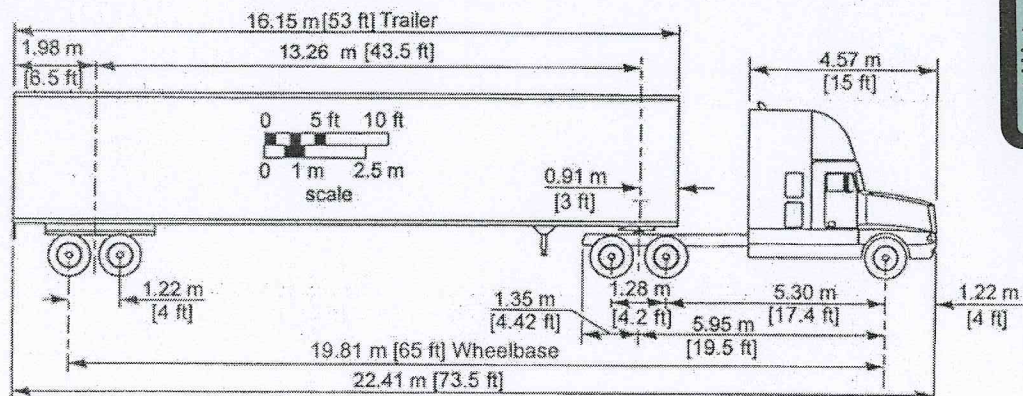
An approved encroachment permit shall be obtained from the county road office for any access from the proposed pit to Madison Road, a county maintained roadway. The applicant shall prep Madison Road and apply magnesium chloride (mag) for dust control from the project site to the millings at the I-90 overpass. The mag shall be properly maintained to provide adequate dust control abatement for the entire duration of the gravel hauling project; which may include re-grading and additional mag application.

A pre-construction meeting shall be scheduled with the County Road Department prior to the start of any road preparation or mag application.

All areas of the public right of way disturbed during construction activities must be sodded or reseeded.

Sincerely,


George Durkin
County Engineer



**Exhibit 2-16. Minimum Turning Path for Interstate Semitrailer
(WB-20 [WB-65 and WB-67]) Design Vehicle**

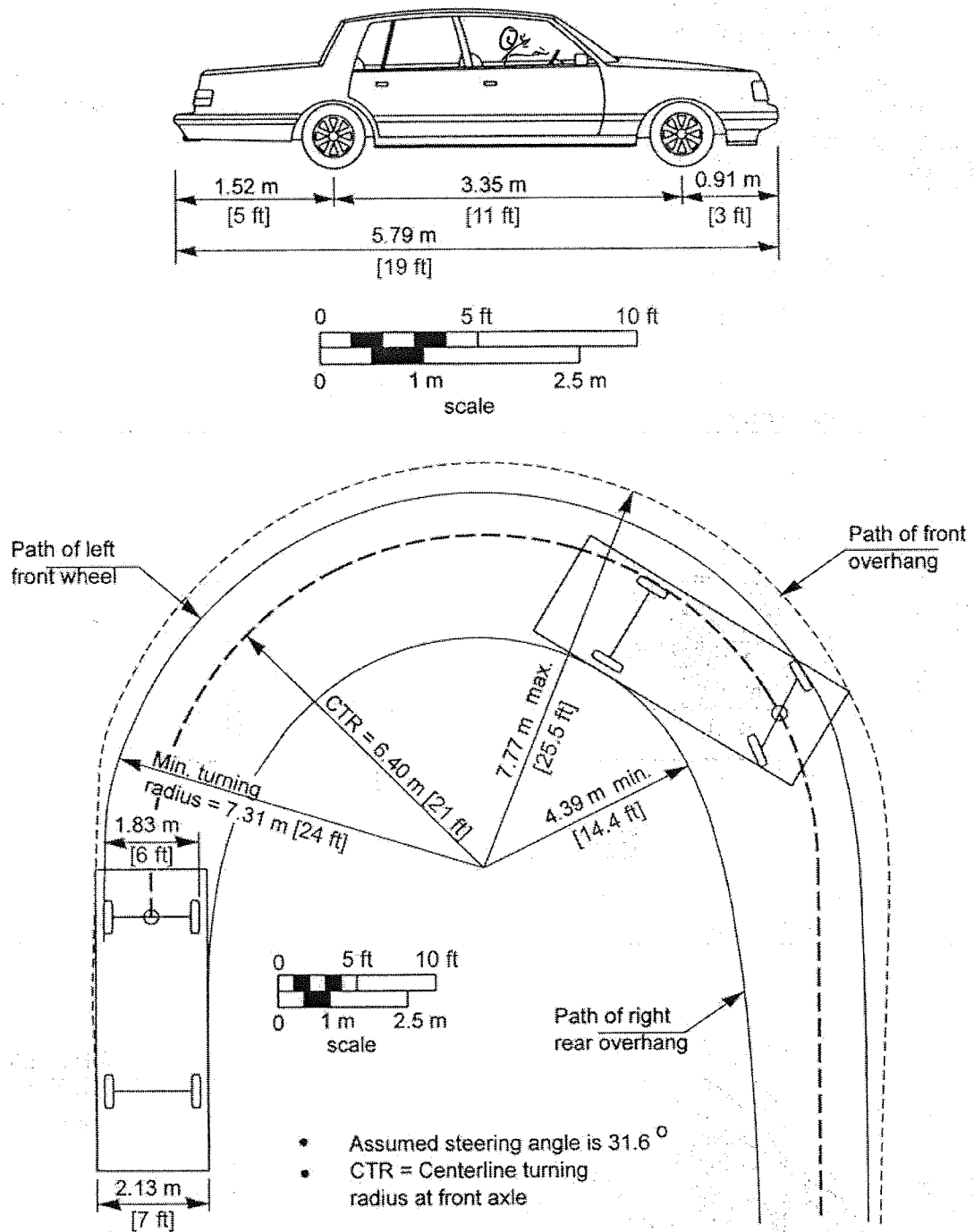


Exhibit 2-3. Minimum Turning Path for Passenger Car (P) Design Vehicle



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

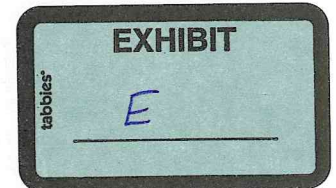
Jim Lynch, Director
Brian Schweitzer, Governor

July 13, 2009

Tom Rogers - Planner
Gallatin County Planning Department
311 West Main #108
Bozeman, MT 59715



Subject: Conditional Use Permit Request for Zuelke Gravel Pit
MDT Comments



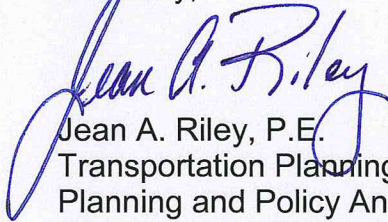
Dear Tom,

The Montana Department of Transportation (MDT) staff reviewed the information you supplied concerning the Conditional Use Permit request for the Zuelke gravel pit operated by Bullock Contracting, LLC. This pit is being proposed as a material source for an MDT project (Structures – SE of Manhattan). The pit does not directly access an MDT route. MDT does not have direct jurisdiction for the pit access; however, we would like you to take our comments and concerns into account during your permitting process.

- The intersection of Madison Road and Secondary 205 should be reviewed to determine that the northbound design vehicle (transport truck) turning east off Madison Road can make this movement without encroachment into the westbound traffic lanes on Secondary 205. The design vehicle used will determine the turning radius.
- The distance from Secondary 205 to the railroad tracks must be able to accommodate storage of at least design vehicle without encroachment on to Secondary 205. MDT is concerned with westbound left-turning traffic being stopped due to trains which results in stopping the Secondary 205 through traffic.
- A similar concern is with the northbound traffic being stopped at Secondary 205 and not clearing the railroad tracks. The distance between the track and Secondary 205 must allow storage of the design vehicle without encroachment on Secondary 205 or the railroad tracks.
- The entire facility for the gravel pit (pit, access road, stockpiles) is within the floodplain; please confirm there will be no impact to MDT facilities (I-90, Secondary 205, and Secondary 286) from this facility.
- The proposed plan discusses discharging water due to pit dewatering. Please confirm the discharge water will not have an adverse impact to MDT facilities (I-90, Secondary 205, and Secondary 286).

Thank you for the opportunity to review this conditional use permit and provide comments. If you have any questions concerning these comments, please contact me at (406)444-9456 or email at jriley@mt.gov.

Sincerely,



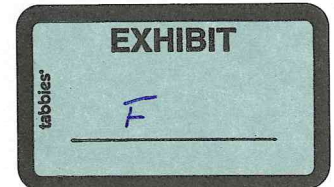
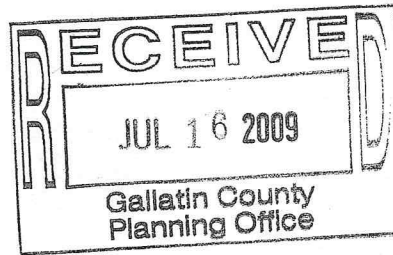
Jean A. Riley, P.E.
Transportation Planning Engineer
Planning and Policy Analysis Bureau
Rail, Transit & Planning Division

Copies: Jeff Ebert, Butte District Administrator
 Ray Stocks, Bozeman Maintenance Chief
 Rob Bukvich, Bozeman Utility Agent
 Kevin Christensen, Construction Engineer
 Stan Brelin, Traffic and Safety Bureau
 Dave Hedstrom, Hydraulics Section
 Jim Skinner, Planning and Policy Analysis Bureau
 File



MONTANA RAIL LINK INC.
101 INTERNATIONAL DRIVE
POST OFFICE BOX 16390
MISSOULA, MONTANA 59808-6390
(406) 523-1500

July 15, 2009



Tom Rogers, Planner
Gallatin County Planning Department
311 West Main, #208
Bozeman, MT 59715

Subject: Conditional Use Permit Request for Zuelke Gravel Pit
Railroad Grade Crossing – DOT #091 455 E
Madison Road

Montana Rail Link (MRL) has been asked to comment on this project by your office. Please consider the following comments.

There are currently cross buck signs in place at this location maintained by the railroad as required by state law along with stop signs and advance warning signs placed and maintained by the road authority, Gallatin County. MRL will rely on Gallatin County and/or the Montana Department of Transportation to comment on the available sight distance at the railroad grade crossing from the perspective of the users of the road and the road profile at the railroad grade crossing. A major concern for the railroad at railroad crossings adjacent to parallel highways and frontage roads is the distance between the edge of the road and the railroad crossing. It's important for safety that this distance be no less than the full length of the maximum sized truck anticipated on the road. Meeting this requirement reduces the concern that the rear end of a truck, waiting to enter the highway or frontage road, will occupy the railroad crossing. It appears that this distance on Madison road, approximately 150 feet, meets this requirement.

MRL is concerned with the wood planks that act as the surface for this railroad crossing. The railroad maintains this wood surface as required by state law for the normal or ordinary traffic expected on this road. The heavy haul traffic over this crossing, anticipated during the Zuelke Gravel Pit project, is certainly not
RK/C-4481....Stations/Three Forks

Gallatin County Planning Department
July 15, 2009
Page 2

ordinary or normal traffic. This haul traffic will almost certainly cause this timber plank surface to deteriorate to the point of having to be replaced, perhaps more than once, during the project. For budget purposes you can assume that it will cost \$9,000 for labor and material to install a new plank surface each time it requires complete replacement. Our guess would be that this surface will require replacement at least twice during the truck haul, once soon after hauling starts and once at the end of the haul.

For a cost of \$22,000, MRL could install a permanent concrete surface at this location and this may be more economical than replacing the timber surface once or more. It would be our recommendation that Gallatin County require the contractor to fund the one time installation of a concrete crossing surface at the railroad grade crossing on Madison Road as a condition of this permit. A concrete surface requires an asphalt apron on both sides of the track to ensure long term durability, but I believe that condition is met at Madison Road.

If you have any questions please contact Steve Werner at (406) 523-1551 or email swerner@mtrail.com.

Sincerely,



Richard L. Keller
Chief Engineer

SRW:tjm

RK/C-4481....Stations/Three Forks